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मानक

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IS 4106 (1994): Textiles - Bunting Cloth, Cotton Khadi,
Dyed [TXD 8: Handloom and Khadi]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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वस्त्रादि — सूती खादी का रंगीन बंटिंग (झंडी)
का कपड़ा — विशिष्ट
(पहला पुनरीक्षण)
Indian Standard
TEXTILES — BUNTING CLOTH,
COTTON KHADI, DYED — SPECIFICATION
(*First Revision*)

UDC 677.21.074 (BUNTING)

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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

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Price Group 2

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Handloom and Khadi Sectional Committee had been approved by the Textile Division Council.

This standard was first published in 1967. This standard has been revised to overcome difficulties encountered by the Khadi industry in implementation of the standard.

Following are the important changes carried out while revising this standard:

- a) Tolerances on length and width as notified by the Government of India under *Trade and Merchandise Marks Act, 1958 (43 of 1958)* have been adopted.
- b) For checking the conformity of the cloth to the requirements laid down in the standard, a provision has been made for testing of the samples in prevailing atmospheric conditions. However, in case of dispute, the samples shall be tested after conditioning in the standard atmospheric conditions.
- c) The standard provides for agreement between the buyer and the seller with respect to permissible number of defects in the fabric.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

**AMENDMENT NO. 1 MARCH 2002
TO
IS 4106 : 1994 TEXTILES — BUNTING CLOTH,
COTTON KHADI, DYED — SPECIFICATION**

(First Revision)

(Page 1, Table 1, col 4 and 5, Tolerance, percent on 'Picks/dm' and 'Mass g/m²') — Substitute '±10' for '±5' at both the places.

(TX 08)

Reprography Unit, BIS, New Delhi, India

Indian Standard

TEXTILE — BUNTING CLOTH, COTTON KHADI, DYED — SPECIFICATION

(First Revision)

1 SCOPE

1.1 This standard prescribes constructional particulars and other requirements of bunting cloth, cotton khadi, dyed.

1.2 This standard does not specify the general appearance, feel, shade, etc, of the cloth.

2 REFERENCES

The Indian Standards listed at Annex A are necessary adjuncts to this standard.

3 ATMOSPHERIC CONDITIONS FOR TESTING

Test specimens may be conditioned and tested in the prevailing atmospheric conditions for checking the conformity of the cloth to the standard. However, in case of dispute, the specimens shall be conditioned and tested in the standard atmosphere as specified in IS 6359 : 1971.

4 GENERAL REQUIREMENTS

4.1 Yarn

The yarn used in the manufacture of cloth shall be hand-spun from clean carded cotton. It shall be reasonably even and free from leaf particles, slubs,

neps and other spinning defects. The approximate count of warp and weft yarn is given in Table 1.

4.2 Cloth

4.2.1 The selvages shall be firm and well woven.

4.2.2 The cloth shall be dyed to shades as agreed to between the buyer and the seller.

4.2.3 The cloth shall be free from dressing and filling materials and substances liable to cause subsequent tendering.

4.2.4 The cloth, when visually examined, shall be reasonably free from spinning, weaving and processing defects.

5 REQUIREMENTS

5.1 Constructional particulars and breaking load of the cloth shall conform to the requirements specified in Table 1.

5.2 The cloth shall also conform to other requirements specified in Table 2.

5.3 The cloth shall be woven in plain weave.

5.4 Dimensions

Length and width of the cloth when determined in

**Table 1 Constructional Particulars and Breaking Load Requirements for
Bunting Cloth, Cotton Khadi, Dyed**
(Clause 5.1)

	Count of Yarn (for Guidance only) Universal Count (Cotton Count)		Ends/dm	Picks/dm	Mass g/m ²	Breaking Load (on 10.0 × 20 cm Strips), N	
	Warp (1)	Weft (2)				Warp (6)	Weft (7)
	59 tex (10 _s Ne)	74 tex (8 _s Ne)	142	126	190	450	330
Tolerance, Percent	—	—	±5	±5	±5	-10	-10
	← see Note →						
Method of Test	—	—	IS 1963 : 1981		IS 1964 : 1970 or Annex D	IS 1969 : 1985	

NOTE — Any increase in values of ends/dm, picks/dm or mass (g/m²) beyond positive tolerance shall not be a cause of rejection of the fabric.

IS 4106 : 1994

accordance with IS 1954 : 1990 shall be as agreed to between the buyer and the seller or as declared by the seller subject to the tolerances notified by the Government of India, Ministry of Commerce and Industry vide Notification No. S.O. 2937 dated 20 September 1962 issued under *Trade and Merchandise Marks Act, 1958 (43 of 1958)* (see Annex B).

5.5 Freedom from Defects

5.5.1 The cloth when visually inspected shall be free from the major flaws given in Annex C. However, permissible number of flaws per unit length may be as agreed to between the buyer and the seller.

5.5.2 For details of the flaws mentioned in 5.5.1, a reference may be made to IS 4125 : 1987.

5.6 Sealed Sample

5.6.1 In order to illustrate or specify the indeterminable characteristics, such as general appearance, lustre, feel and shade, if a sample has been agreed upon and sealed, the supply shall also be in conformity with the sample in such respects.

5.6.2 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

Table 2 Other Requirements for Bunting Cloth, Cotton Khadi, Dyed
(Clause 5.2)

Characteristics (1)	Requirement (2)	Method of Test (3)
i) Dimensional change, percent, <i>Max</i>	5	IS 2977 : 1989
ii) Scouring loss percent, <i>Max</i>	2.5	IS 1383 : 1977
iii) pH value of the aqueous extract	6.0 to 8.5	IS 1390 : 1983 (Cold method)
iv) Colour fastness		
a) Light	5 or better	IS 2454 : 1985
b) Washing : Test 3		IS 764 : 1979
1) Change in colour	4 or better	
2) Staining of adjacent fabric	4 or better	

6 MARKING

6.1 The cloth shall be suitably marked with the following information :

- a) Name of the material for example, bunting cloth, cotton khadi, dyed;

- b) Length (m) and width (cm); and
c) Indication of the source of manufacture.

6.2 BIS Certification Marking

The product may also be marked with the Standard Mark.

6.2.1 The use of the Standard Mark is governed by the provisions of Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7 PACKING

7.1 Unless otherwise agreed upon by the buyer and the seller, the cloth shall preferably be packed in bales or cases in conformity with the procedure laid down in IS 1347 : 1972 or IS 293 : 1980.

8 SAMPLING

8.1 Lot

The quantity of the cloth delivered to a buyer against one despatch note shall constitute a lot.

8.2 The conformity of the lot to the various requirements specified in the standard shall be determined on the basis of tests carried out on the samples selected from the lot.

8.3 Unless otherwise agreed, the number of pieces selected at random for inspection shall be in accordance with Table 3.

Table 3 Sample Size and Permissible Number of Non-conforming Pieces

Lot Size (1)	Sample Size (2)	Permissible Number of Non-conforming Pieces (3)	Sub-sample Size (4)
Up to 25	3	0	2
26 to 50	5	0	2
51 to 150	8	0	3
151 to 300	13	1	3
301 to 500	20	1	5
501 to 1 000	32	2	5
1 001 and above	50	3	8

8.3.1 For selection of samples at random from the lot, procedure given in IS 4905 : 1968 may be followed.

8.4 Number of Samples and Criteria for Conformity
It shall be as follows :

Characteristics	Number of Samples	Criteria for Conformity
Ends, picks, mass, length, width and freedom from defects	According to col 2 of Table 3	Number of non-conforming pieces shall not exceed the corresponding number given in col 3 of Table 3
Dimensional change, scouring loss, pH value, colour fastness and breaking load	According to col 4 of Table 3	All the test pieces shall meet the requirement

ANNEX A*(Clause 2)***LIST OF REFERRED INDIAN STANDARDS**

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
293 : 1980	Code for seaworthy packaging of cotton yarn and cloth (<i>third revision</i>)	1964 : 1970	Methods for determination of weight per square metre and weight per linear metre of fabrics (<i>first revision</i>)
764 : 1979	Method for determination of colour fastness of textile materials to washing : Test 3 (<i>second revision</i>)	1969 : 1985	Methods for determination of breaking load and elongation of woven textile fabrics (<i>second revision</i>)
1347 : 1972	Inland packaging of cotton cloth and yarn (<i>first revision</i>)	2454 : 1985	Methods for determination of colour fastness of textile materials to artificial light (Xenon lamp) (<i>first revision</i>)
1383 : 1977	Methods for determination of scouring loss in grey and finished cotton textile materials (<i>first revision</i>)	2977 : 1989	Fabrics (other than wool) — Methods for determination of dimensional changes on soaking in water (<i>first revision</i>)
1390 : 1983	Methods for determination of pH value of aqueous extracts of textile materials (<i>first revision</i>)	4125 : 1987	Glossary of terms pertaining to defects in fabrics (<i>first revision</i>)
1954 : 1990	Determination of length and width of woven fabrics — Methods (<i>second revision</i>)	4905 : 1968	Methods for random sampling
1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)	6359 : 1971	Method for conditioning of textiles

ANNEX B*(Clause 5.4)*

**EXTRACTS FROM THE GOVERNMENT OF INDIA, MINISTRY OF COMMERCE AND
INDUSTRY (TRADE AND MERCHANDISE MARKS) NOTIFICATION NO. S. O. 2937,
DATED 20 SEPTEMBER 1962**

1. A trade description of length stamped on grey, bleached, mercerised or coloured cotton piece-goods :
 - i) in pieces stamped as of length 9 metres or below, the stamped length shall not exceed the actual length by more than 1 percent of the piece length or 7.5 cm whichever is less; and
 - ii) in pieces stamped as of length above 9 metres, the stamped length shall not exceed the actual length by more than 0.6 percent of the piece length or 7.5 cm whichever is higher.
2. A trade description of width stamped on grey, bleached, mercerised or coloured cotton piece-goods :
 - i) in pieces stamped as of width 102 cm or below, the stamped width shall not exceed the actual width at any point by more than 1.3 cm;
 - ii) in pieces stamped as of width over 102 cm up to 152 cm, the stamped width shall not exceed the actual width at any point by more than 1.25 percent of the stamped width of the piece;
 - iii) in pieces stamped as of width 152 cm and above, the stamped width shall not exceed the actual width at any point by more than 1.25 percent of the stamped width of the piece or 2.5 cm whichever is less.

Provided that the average length of the pieces in question shall not be less than the stamped length.

Provided that average width of the pieces in question shall not be less than the stamped width.

ANNEX C
(Clause 5.5.1)

LIST OF MAJOR FLAWS

- | | |
|---|---|
| 1) One or more ends missing in the body of the material throughout its length, more than three ends missing at a place and running over 60 cm, or prominently noticeable double end running throughout the piece. | 9) More than two adjacent ends running parallel, broken or missing and extending beyond 10 cm. |
| 2) Undressed snarls noticeable over a length exceeding 5 percent of the length of the piece. | 10) Noticeable warp or weft float in the body of the fabric. |
| 3) Smash definitely rupturing the texture of the fabric. | 11) Noticeable oil or other stain in the fabric. |
| 4) Hole, cut or tear. | 12) Oily weft in the fabric. |
| 5) Reed marks prominently noticeable over a length exceeding 5 percent of the length of the piece. | 13) Prominently noticeable slub |
| 6) Defective or damaged selvedge noticeable over a length exceeding 5 percent of the length of the piece. | 14) Gout due to foreign matter, usually lint or waste woven into the fabric. |
| 7) Weft crack of two or more missing picks across the width of the fabric. | 15) Prominent selvedge defect. |
| 8) Warp or weft bar due to the difference in raw material, count, twist, lustre, or spacing of adjacent groups of yarn (starting mark). | 16) Fuzzy appearance. |
| | 17) Significant shading or listing in fabric having a gradual change in tone or depth of shade of fabric (excluding selvedge or border running parallel to the selvedge). |
| | 18) Coloured flecks. |
| | 19) Blurred or dark patch. |
| | 20) Patchy, streaky or uneven dyeing. |
| | 21) Dye bar. |

ANNEX D
(Table 1)

METHOD FOR DETERMINATION OF MASS OF FABRIC

D-1 Cut four specimens of 100 mm × 100 mm from a sample. Condition all the specimens in the desiccator charged with saturated solution of sodium nitrate at $27 \pm 2^{\circ}\text{C}$ for a period of 24 hours. Remove all the specimens from the desiccator and immediately

determine their collective mass in weighing balance to the nearest milligram.

D-2 Calculate mass of fabric in g/m^2 .

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